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We claim

1. A process for preparing impact-modified polystyrene which has
5 a melt volume flow ratio MVR of at least 8 cm³/10 min,
measured to EN ISO 1133 at a test temperature of 200°C with a
nominal load of 5 kg, by anionic polymerization of styrene in
the presence of a styrene-butadiene block copolymer, where
10 use is made of an organyl alkali metal compound as anionic
polymerization initiator, and of an organyl aluminum compound
as retarder.
2. A process as claimed in claim 1, where sec-butyllithium is
used as anionic polymerization initiator.
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3. A process as claimed in claim 1 or 2, where
triisobutylaluminum (TIBA) is used as retarder.
4. A process as claimed in any of claims 1 to 3, where the
20 anionic polymerization is undertaken in the presence of an
initiator composition which is obtainable by mixing
sec-butyllithium and styrene, and then adding TIBA.
5. A process for preparing thermoplastic molding compositions
25 comprising
 - a) from 50 to 99.9% by weight of an anionically polymerized
impact-modified polystyrene which is prepared as claimed
in any of claims 1 to 4,
30 and
 - b) from 0.1 to 50% by weight of a rubber-free or
impact-modified polystyrene polymerized by an anionic or
free-radical route and having a number-average molar mass
35 of not more than 20 000 g/mol, determined by gel
permeation chromatography in tetrahydrofuran.

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polymerization initiator, and of an organyl aluminum compound
as retarder.
2. A process as claimed in claim 1, where sec-butyllithium is
used as anionic polymerization initiator.
- 15 3. A process as claimed in claim 1 or 2, where
triisobutylaluminum (TIBA) is used as retarder.
4. A process as claimed in any of claims 1 to 3, where the
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initiator composition which is obtainable by mixing
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5. A process for preparing thermoplastic molding compositions
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